
APS

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February 1, 2008

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

RE: Arizona Public Service Company's Initial Comments
from the Resource Planning Workshop pertaining to PURPA Standards
DOCKET NO. E-00000E-05-0431

Dear Madam or Sir:

Arizona Public Service Company is providing the attached comments in response to a request for written comments from the Resource Planning Workshop, held on January 11th 2008, pertaining to PURPA Standards.

If you have any questions or wish to discuss these matters further, please call Jeff Johnson at 602-250-2661.

Sincerely,

Barbara Klemstine

Attachment

BK/dst

Cc: Ernest Johnson
Terri Ford
Barbara Keene
Parties of Record

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This 1st day of February, 2008.

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**Arizona Public Service**
**Initial Responses Regarding**
**PURPA Standards**
**Docket No. E-00000E-05-0431**
**February 1, 2008**

## Introduction:

The Arizona Corporation Commission ("Commission" or "ACC") held a resource planning workshop to address non-procurement issues on January 11, 2008. At that workshop, two standards from the federal Energy Policy Act of 2005 ("EPACT 2005"), the "Fuel Sources" standard and the "Fossil Fuel Generation Efficiency" standard, were discussed. Commission Staff requested that interested parties provide written comments on those standards. Arizona Public Service Company ("APS" or "Company") is providing these comments in response to that request.

## Background:

EPACT 2005 adopted new Public Utility Regulatory Policies Act ("PURPA") standards. The purpose of the PURPA Standards is to encourage: (1) conservation of energy supplied by electric utilities; (2) the optimization of efficiency of electric utility facilities; and (3) equitable retail rates for electric consumers.[1] Pursuant to EPACT 2005, each state commission must consider and make an independent determination on adoption of the new PURPA standards. While the Commission must consider the PURPA Standards, its decision whether to implement any of the standards is discretionary.[2] The Commission must make such a determination by August 8, 2008.[3]

## Fuel Sources/Fuel Diversity:

The PURPA Fuel Sources standard on fuel diversity states:

> *Each electric utility shall develop a plan to minimize dependence on one fuel source and to ensure that the electric energy it sells to consumers is generated using a diverse range of fuels and technologies, including renewable technologies.*[4]

APS believes that maintaining appropriate fuel diversity is an integral part of the resource planning process. However, the Company notes that the federal standard, as written, does not provide specific guidance and, obviously, fuel diversity objectives must be considered in light of other important factors, such as cost, environmental impacts and other risk factors.

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[1] 16 U.S.C. § 2601(1).
[2] 16 U.S.C. § 2621(a) and (c).
[3] 16 U.S.C. § 2622(b)(3)(B).
[4] 16 U.S.C. § 2621(d)12.

APS's response to the ACC Staff's specific questions on this PURPA standard is provided below.

Question #1: Should the Commission adopt the PURPA Fuel Diversity standard? Why or why not? If so, how?

Response: APS believes that the appropriate way to address this PURPA standard is to incorporate the general concept of considering fuel diversity into the revised resource planning rules that are being developed through the Commission's on-going workshops. In our opinion, energy source diversity is an important element of the resource planning process. Fuel diversity cannot be considered in isolation of other factors such as cost, environmental impacts, resource availability and risk factors. A robust resource planning process is the ideal venue to consider energy source diversity for the following reasons:

1. The resource planning process has the type of long-term perspective necessary to address energy source diversity issues.

2. The resource planning process is designed to balance the many trade-offs that are inherent aspects of resource selection. These trade-offs include a wide spectrum of issues such as costs, environmental impacts, fuel supply availability, fuel price volatility, technological maturity, and development risks.

3. A wide range of potential energy supply resources are examined through the resource planning process. Although the PURPA standard is narrowly labeled as a fuel diversity standard, there are many types of resources that can contribute to improved energy supply diversification including (among others) energy efficiency and renewable resources. The resource planning process should be designed to comprehensively consider all resource types.

4. Formal resource planning processes typically provide an open and participative forum so that the different opinions and viewpoints of interested parties and stakeholders can be considered on issues such as energy source diversity.

5. Formal resource planning processes typically specify a filing frequency for a utility to file a resource plan and associated analysis. The periodic nature of these filings will ensure that the issue of energy source diversity is

repeatedly addressed and can respond to the inevitable changes in the resource planning variables.

Question #2: What information or studies already exist on Fuel Diversity?

Response: There are many useful sources of information on this topic. Much of the data needed to assess current levels of fuel diversity can be found in various required filings, such as the FERC Form 1 filing or various Energy Information Administration reports (all of which are available to the public). However, none of these studies have determined the optimum level of fuel diversity.

Question #3: What are the current and foreseeable generation portfolios?

Response: APS's recently-filed Resource Alternatives Report, which was filed in Docket No. E-01345A-08-0010, highlights the major resource alternatives that are available in the near future. The major choices include energy efficiency, renewable resources (including distributed, solar, wind, geothermal, among others), conventional coal, nuclear and natural gas.

Question #4: What are the potential benefits of Fuel Diversity?

a. Would fuel price and energy price risk be mitigated?
b. Would regulatory risk associated with individual fuels be mitigated?
c. Would reliability be increased?
d. Would operational flexibility be increased?
e. Would environmental impacts be reduced?
f. Would there be any other benefits?

Response: There are many potential benefits of pursuing policies that lead to increased fuel diversity. However, the benefits (and risks) associated with different resource alternatives can be very unique. For example, a resource strategy that relies heavily upon wind energy can certainly reduce fuel price risk by reducing the quantities of natural gas fuel required. However, this strategy is not likely to improve system reliability or operational flexibility because of the intermittent nature of wind energy. On the contrary, other types of generating capacity may need to be constructed to ensure adequate reliability and to provide the operational flexibility to compensate for an intermittent generation source such as wind.

A second example could be the pursuit of a strategy to increase the amount of coal-fired generation. Similar to the wind example, the increased coal energy would help to reduce fuel price risk by reducing the quantities of natural gas fuel required. The increased

coal capacity would also improve system reliability and operational flexibility. However, there could be environmental impacts associated with the coal generation.

Question #5: What are the potential detriments of Fuel Diversity?

Response: If "hard targets," which require specific amounts of specific resources, were established for fuel diversity, this could result in a less than optimal fuel mix when other important factors, such as cost, are also considered.

Question #6: How would the standard affect cost?

Response: The cost impact of varying levels of fuel diversity would need to be addressed through each utility's resource planning process.

Question #7: What other factors need to be considered?

Response: The analysis of fuel diversity issues must also consider the impacts on operating and maintenance costs, capital costs, environmental impacts, availability and cost of fuel supplies, resource development risks, and many other factors that are typically included within a utility resource planning analysis.

Question #8: If adopted, to which electric utilities should the PURPA Fuel Diversity standard apply?

Response: APS believes that any standard should apply to all jurisdictional "load-serving" entities that serve retail customers, including the traditional utility companies and competitive retail providers.

**Fossil Fuel Generation Efficiency:**

The PURPA standard on Fossil Fuel Generation Efficiency states:

> *Each electric utility shall develop and implement a 10-year plan to increase the efficiency of its fossil fuel generation.*[5]

Improvement to fossil fuel generation efficiency is an integral part of the Company's planning process. APS's existing business practices ensure that cost-effective fuel efficiency improvements are identified and implemented at the existing generating units and that further requirements are not necessary. As with the Fuel Diversity standard discussed above, adopting a separate federal standard rather than including this general concept in the Commission's resource planning process would be duplicative.

[5] 16 U.S.C. § 2621(d)(13).

APS's response to the ACC Staff's specific questions on this PURPA standard is provided below.

Question #1: Should the Commission adopt the PURPA Fossil Fuel Generation Efficiency standard? Why or why not? If so, how?

Response: APS does not believe that a separate federal requirement is necessary because it would be duplicative to the Commission's resource planning process. APS's normal business practice is to consider and implement cost-effective efficiency improvements.

Question #2: Is there currently sufficient competitive pressure to induce generation owners to increase plant efficiency?

Response: APS believes that there are sufficient incentives for generation owners to pursue cost-effective efficiency improvements. In today's environment of relatively high fossil fuel prices, generation owners can potentially save substantial amounts and improve their competitive position by implementing cost-effective efficiency improvements to their power plants. Regardless of the adoption of this PURPA standard, APS will continue to implement cost-effective efficiency improvements to its power plants. APS's recent steam turbine modifications at Cholla Units 2 & 3 are an excellent example of these efficiency improvements. APS was able to improve the fuel efficiency and increase energy output by replacing the existing high-pressure and intermediate pressure turbine rotors. Similar modifications are planned for Four Corners Units 4 & 5.

Question #3: What are the potential benefits of adopting the standard?

a. Would utility operating costs be lowered?
b. Would environmental impacts be reduced?
c. Would utility environmental compliance costs be reduced?

Response: APS does not believe that operating costs, environmental impacts or compliance costs will be reduced by adoption of a new standard concerning fossil generation fuel efficiency. APS believes that these benefits are currently being achieved and will continue to be achieved through normal business practices.

Question #4: What are the potential detriments of adopting the standard?

a. How would the standard affect costs?
b. Would there be additional plant and equipment expenditures?
c. Would there be additional training for plant operators?
d. Would there be operating costs from plant improvements?

e. Would there be additional environmental requirements?

Response: As the proposed PURPA standard is written, it makes no mention of the cost-effectiveness of the efficiency improvements. Fossil generation efficiency improvements generally involve increased expenditures for plant and equipment. These improvements could also lead to higher non-fuel operating costs in some instances. However, a generation owner will typically only implement these efficiency improvements when these cost increases are more than offset by cost savings due to reduced fuel consumption.

Question #5: Would the standard impact reliability?

Response: Generally, APS does not believe that the adoption of a fossil fuel generation efficiency improvement standard will impact reliability. In the few cases where reliability impacts are anticipated, the cost-effectiveness evaluations should account for any costs necessary to mitigate the expected reliability impacts.

Question #6: If adopted, to which electric utilities should the PURPA Fossil Fuel Generation Efficiency standard apply?

Response: If adopted, APS believes that this standard should be applied to generation-owning electric utilities that are under the Commission's jurisdiction.

Question #7: If adopted, should the timeframe be modified?

Response: If the Commission chooses to address the concept of fossil fuel generation efficiency, it should be addressed in the Commission's IRP process, where stakeholders can discuss this issue and all of its implications. Any timeframe should be incorporated into the Commission's rules, rather than as a stand-alone standard.

Question #8: If adopted, how should the plans be developed?

Response: Please refer to the response in Question #7.

Question #9: If adopted, what should the plans contain?

Response: Please refer to the response to question #7.

**Conclusion:**

APS agrees that the diversity of energy sources and the efficiency of its fossil fuel generation plants are important considerations. These factors are fundamental to any electric utility's

resource planning and business practices. The Company notes that the federal Fuel Diversity standard lacks specific guidance as how it would apply in practice. Likewise, the federal Fossil Fuel Generation Efficiency standard does not address cost effectiveness, which is a critical consideration. APS believes that fuel diversity must be considered along with other important considerations, such as cost, environmental impacts and other risk factors. The Commission's anticipated resource planning rules are the appropriate place to address both the concept of fuel diversity and fossil fuel generation efficiency.